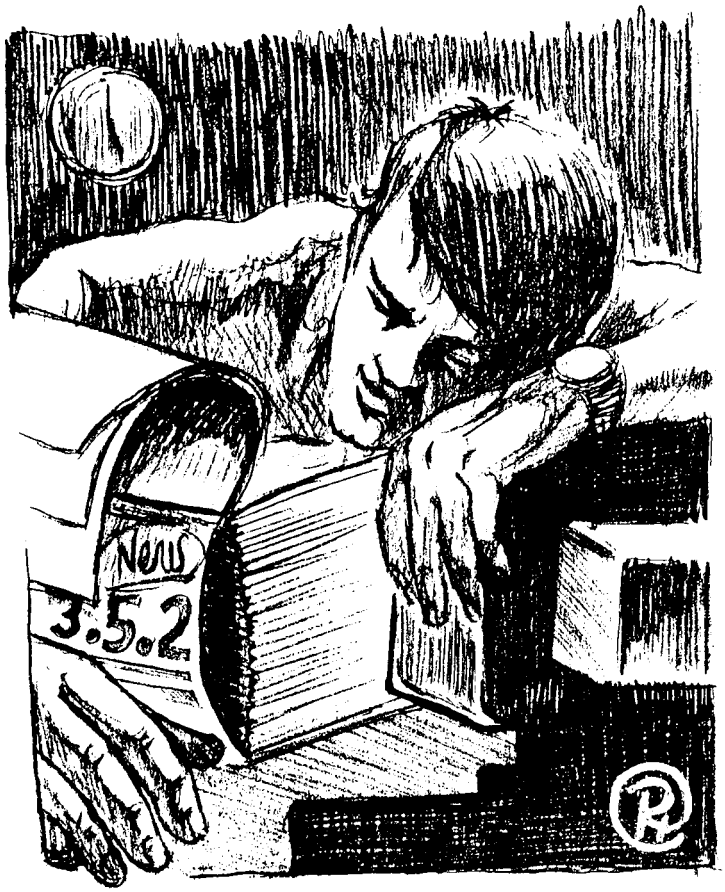
OLE, photocopiers and the "futz factor"



Richard Hockney

It was late, past 10PM, on a cold Wednesday evening in January.

I was working on my home computer, putting the final touches on The Canadian Internet Handbook, *which I had co-authored. I expected to spend five or ten minutes making a few changes to some diagrams, after which I would transmit "camera-ready" copy to the publisher. Essentially, what I saw on my computer screen is what would actually appear in the book when published. Given the rapid advances in computer technology, many authors now routinely do everything except print the book.*

As a heavy user of Microsoft Windows, I had co-written the book using the popular Microsoft Word For Windows word processing software. Computer diagrams scattered throughout the chapters were prepared using a nifty software package known as Visio 2.0 — or what I call, "drawing for dummies." Charts were imported directly from within Lotus 1-2-3.

Much of the interaction between these different software packages used a Windows technology known as Object Linking and Embedding (OLE) 1.0 — a program which permits information from one program to be incorporated within another. To edit a diagram, one merely has to double click on it within the word processing document, and OLE 1.0 would load the other program to let you make the changes.

Moving to the first diagram, I double clicked...tired, and hoping to be asleep within the half hour.

WHAMMO. The diagram blew up on the screen, to about 10 times its original size...Odd, I thought, something isn't right here.

We all need to ask ourselves whether we should spend time "futzing" with new technology right away — or whether we should wait for it to mature a little.

by Jim Carroll

There isn't a personal computer user in North America who isn't somehow using computer software from Microsoft. The company has achieved a position in the computer industry which few would have dreamed possible ten years ago. From its Microsoft Windows products, to its stable of word processing and spreadsheet software, from its electronic mail software to its sophisticated client/server database products, the company is close to achieving dominance in the software industry. Few other companies can marshal the resources that Microsoft can. Then again, few other companies have $2.6 billion in cash on the balance sheet!

For many companies and individuals, a kind of love/hate relationship with Microsoft is the norm.

With sales of Microsoft products booming to some $6.2 billion US last year, the company obviously puts out good software. The corporate world loves Microsoft products — software such as Microsoft Word, Excel and Access constantly appear at the top of the best-seller charts, and have become the standard within many organizations.

Yet, many people also indicate a growing sense of frustration and unease with Microsoft. For some, Microsoft has become the new IBM, confident about its plans, its future, and its abilities, and arrogant about itself to the point of dislike. In whispered tones, people express concern about the fact that one company can be so dominant in such an important industry.

Even as such concern is expressed, it is also true that we are only seeing the beginning of the role that Microsoft will play in our office environment. If its current plans bear fruit, technologies such as OLE (Object Linking and Embedding) 2.0 and Microsoft at Work will fundamentally change the way that we use computers.

Microsoft is in a funny position — people love it for its products but hate it for its arrogance.

At the moment, I was kind of hating Microsoft.

Some bugs in my old version of Word for Windows meant that I had to upgrade to a new version, 6.0, in order to finish the book. As I played around with the new software, I also discovered that it happened to use a new version of OLE — version 2.0.

When I clicked on the diagram, what was supposed to happen was that version 2.0 of OLE would permit me to edit the diagram directly within Word for Windows. What really happened is that the diagram exploded in size, to perhaps 10 times its size on the screen. In doing so, it took almost 10 minutes to get to the point that it would permit me to change the diagram.

For the next hour and a half, I struggled with the diagram, attempting to change it and get it back to its original size after making the changes. What was a 10-second change in the old software had become an hour and a half nightmare.

Microsoft at Work was announced with great fanfare in July of 1993. Sharing the New York stage with Bill Gates for the announcement were representatives of companies like Toshiba, Panasonic, Northern Telecom, and Xerox.

More a standard than a product, Microsoft at Work promises nothing less than making everyday, standard office equipment a part of the local area network, controlled and managed from personal computers.

Think of your photocopier running Microsoft Windows, and you have the concept right. Rather than printing a document, taking it to the photocopier, and running twenty copies, you could instruct Microsoft At Work to automatically send 20 copies to the photocopier, and let you know when it is complete. Click on an icon on your computer, and you will be able to see how much paper remains in the tray. Click on another icon, and you can determine how much toner is left in the copier.

Microsoft at Work promises to bring the friendliness of the Microsoft Windows interface to the everyday office device. Telephones, photocopiers, fax machines and other pieces of office equipment will no longer be mere stand-alone devices — instead, they will be an integral part of the "smart office," permitting us to work more efficiently, in less time, and with much less complexity.

It's a wonderful idea, particularly given that many of us have not yet mastered the office copier.

I made it to the second diagram. WHAMMO! The same thing happened. I was getting upset now.

I looked around my office for the manual to see if I could figure out what was going wrong. I began to study up on OLE 2.0.

While looking for the manual, I came across an article I had been reading about the computer "productivity paradox." What had it said? That employees spend up to 50 minutes a week learning about PCs and setting up software?

Microsoft at Work consists of a small bit of Microsoft Windows computer code in your office photocopier, fax machine or telephone. The device is connected to, and becomes part of, your local area network. New versions of Microsoft Windows will support a link to these office devices, permitting you to use them directly from your desktop PC.

In the case of Northern Telecom, for example, implementation of Microsoft at Work within the telephone system will permit an office employee to send and retrieve Meridian voice mail messages directly from the computer rather than the telephone handset. This will permit easier use of broadcast features, and will lead to an integration of voice mail to electronic mail. As the telephone becomes married to the local area network, new opportunities emerge — such as linking incoming calls to a customer database, automatically placing customer profiles on the screen for the service department.

The concept of linking equipment to computer systems is not new — and in some industries has been occurring for several years. Many manufacturing control systems have been automated for several computer generations; power grids and nuclear plants are highly automated, and even music studios are tightly integrated to computer systems.

On the global Internet, the network that has gained attention as a potential backbone to the much hyped "information highway," wide-eyed computer geeks (as they like to be known) have devised systems which let you sit in your living room in Toronto, and control a toaster linked to the Internet in Florida. Why would we want to do that? If we extend the analogy, this type of remote device control lends itself to all kinds of opportunities, particularly in the manufacturing and machine tool sector. Imagine a company that has assigned manufacturing responsibility to its partner in China —it could actually "run the plant" in China from its desk in Canada, using the technologies being pioneered with toasters on the Internet today.

By this time, it was 2:30AM, and I was editing the fourth diagram. There was now a pattern which was clear — when I clicked on the diagram, my computer would enlarge it, and then would go off into never-never land for several minutes. The poor hard disk light was flashing like a lighthouse in the middle of an Atlantic hurricane. Obviously, the poor little thing was overworked.

I sat and waited for ten minutes while the computer churned away.

Looking at the study on my desk, I also saw that the authors (Software Business Technology (SBT) of Sausalito, California) found that staff spent 5.1 hours each week "futzing" *with computers — learning about them, waiting for them to do something, trying to solve new problems. Add it up, and North American business is futzing away about 5 billion hours a year at a cost of $100 billion.*

Me, I was futzing away late at night, growing more impatient by the minute..

Novell, the networking company, has sensed an opportunity to extend the reach of its local area network technology, and has devised Novell Extended Networks. This is a technology that will extend the local area network to security systems, point of sales systems, refrigerators and cooling systems, and other service, manufacturing or control devices. Consider a scenario in which a computer application turns on the coffee at your local McDonald's early in the morning and begins to fry the homefries before the morning shift arrives, and you will see where Novell wants to go.

Undoubtedly, we will see a tighter integration of computer systems to office and manufacturing equipment. The genius of Bill Gates, however, was his realization that by marrying the Microsoft Windows interface to the lowly office photocopier or fax machine, Windows would continue to dominate the office environment. It's a brilliant concept.....and will change the way that we work in offices forever.

As the hours stretched on and daylight began to appear on the horizon, I began to think about what the real problem was — the software I was using had become too powerful and sophisticated.

It was also clear to me that the new version of OLE, 2.0 was wildly exceeding the capabilities of my system. Simply put, my computer was being asked to do too much!

It's not that I don't have a powerful machine: in fact, in the best computer geek talk, it's a 486 clone PC running at 33Mhz, 8 megabytes of main memory, 1.5 gigabytes of disk storage and a graphics accelerator card. It's not a Ferrari, but it's not a Honda Civic. It's more like a Porsche — a fast, dependable, reliable machine.

Yet as soon as it was asked to use the sophisticated power of OLE 2.0, it would screech to a halt.

The "futz factor" meant that I wouldn't be getting any sleep this night.

OLE 2.0 is probably the first complex computer technology to be featured in a television commercial — you know, the ones in which a graph is dragged from an Excel spreadsheet directly into a Word document. Like Microsoft at Work, OLE 2.0 promises to make our use of computers easier, more efficient and more powerful.

The technology represented by OLE 2.0 is related to Microsoft at Work, in that the technology it represents is one of the four key cornerstones to the future direction of the Microsoft Windows operating system. Given the dominance of Microsoft Windows in the marketplace, everyone needs to understand and be concerned with OLE 2.0.

NEW TECHNOLOGY is like drinking wine before its time — we know it's wine, but it sure doesn't leave a good taste in our mouth.

Object Linking and Embedding is the method by which computer objects — which might be a document, graph, picture, bit of sound or other data — can be shared between different Microsoft Windows applications. A computer document under OLE 2.0 is no longer just a computer file — rather, it is a group of different computer objects, each stored within different files, grouped into a single object.

A technology such as OLE 2.0 offers organizations significant advantages and productivity gains, particularly when "objects" are located throughout a corporate network. Imagine a scenario in which a critical client report is in progress, with different individuals working on the text, graphics, artwork and charts. OLE 2.0 is the glue that permits an individual responsible for preparing the master document, to pull together resources and contributions from other staff, resulting in a more cooperative approach to the project.

At 10AM — some twelve hours after I began, I started to transmit the chapters to my publisher. Struggling to stay awake, I had to wonder whether computer technology, and the visions promoted by companies like Microsoft, are simply exceeding the ability of companies to deal with it. Simply put, we must wonder if software is exceeding the capabilities of organizations to intelligently deploy and manage it.

I began to think about this article, and wondered if technologies like Microsoft at Work and OLE 2.0 represented the emergence of a new class of software — software that is too complex, too encompassing, too difficult, to easily incorporate into the office environment.

I began to wonder if this type of software would increase the "futz factor" faced by organizations.

A technology such as OLE 2.0 sounds great, and looks fabulous on television. Yet, the reality is that OLE 2.0 has a long way to go — in fact, it has been reported in the computer trade press that if you merely move a file that is used within an OLE 2.0 document, it has no way of knowing where to find the object. That is a bit of a fundamental failure, is it not?

Likewise, Microsoft at Work is a great concept, and we should begin to see products arrive on the marketplace throughout the next year. Yet, reaction to the first few products released early in 1994 has been muted at best. Some critics have suggested that a technology such as Microsoft at Work will actually encourage the production of more paper, rather than moving us closer to a paperless office.

Since that fateful night struggling with my computer (a struggle that I think I won), I have spent much time observing activities within my Fortune 500 client base. It is clear that throughout corporate Canada, the "futz factor" is predominant, as companies struggle with problems similar to those I encountered that evening. It is clear that technology is outstripping the abilities of companies to intelligently deal with it.

What the heck will happen when we try to marry office equipment to the sophisticated software which we are already struggling with? Won't things become more difficult to implement and manage?

The issues created by technologies such as Microsoft at Work or OLE 2.0 present organizations with a conflict. Obviously, sophisticated technology presents an opportunity for productivity improvements. Linking fax machines to word processing software that automatically looks up entries in a database to determine who should be sent a fax broadcast will certain-

ly present new marketing opportunities. Yet, might this marriage of a technology like OLE 2.0 to Microsoft at Work become so complex that implementation and use becomes a nightmare?

Organizations intent on implementing leading-edge technology will find that applications such as found within OLE 2.0 and Microsoft at Work are tremendously exciting and full of promise. Yet, the "futz factor" promises to make implementation, support and usage a tremendous drain on corporate resources.

New technology is like drinking wine before its time — we know it's wine, but it sure doesn't leave a good taste in our mouth.

We should all ask ourselves whether we want to spend valuable resource time on the "futz factor" right away — or whether we should wait for the technology to mature. CMA

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